

# PATENT COOPERATION TREATY

# PCT



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference<br>IPB/129381   | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |  |
| International application No.<br>PCT/DK 03/00865  | International filing date (day/month/year)<br>12.12.2003  | Priority date (day/month/year)<br>16.12.2002 |
| International Patent Classification (IPC) or both national classification and IPC<br>E04D13/147 |   |  |
| Applicant<br>VKR Holding AS   |   |  |

|   |                                     |  |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
|---|-------------------------------------|--|-------------------------------------|----------------------|----|--------------------------|----------|-----|--------------------------|--|----|--------------------------|----------------------------|---|-------------------------------------|--|----|--------------------------|-------------------------|-----|--------------------------|--|------|--------------------------|---|
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 5 sheets.</p>  |                                     |  |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| <p>3. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td>I</td> <td><input checked="" type="checkbox"/></td> <td>Basis of the opinion</td> </tr> <tr> <td>II</td> <td><input type="checkbox"/></td> <td>Priority</td> </tr> <tr> <td>III</td> <td><input type="checkbox"/></td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>IV</td> <td><input type="checkbox"/></td> <td>Lack of unity of invention</td> </tr> <tr> <td>V</td> <td><input checked="" type="checkbox"/></td> <td>Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>VI</td> <td><input type="checkbox"/></td> <td>Certain documents cited</td> </tr> <tr> <td>VII</td> <td><input type="checkbox"/></td> <td>Certain defects in the international application</td> </tr> <tr> <td>VIII</td> <td><input type="checkbox"/></td> <td>Certain observations on the international application</td> </tr> </table> |                                     | I  | <input checked="" type="checkbox"/> | Basis of the opinion | II | <input type="checkbox"/> | Priority | III | <input type="checkbox"/> | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | IV | <input type="checkbox"/> | Lack of unity of invention | V | <input checked="" type="checkbox"/> | Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | VI | <input type="checkbox"/> | Certain documents cited | VII | <input type="checkbox"/> | Certain defects in the international application | VIII | <input type="checkbox"/> | Certain observations on the international application |
| I   | <input checked="" type="checkbox"/> | Basis of the opinion   |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| II  | <input type="checkbox"/>            | Priority   |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| III   | <input type="checkbox"/>            | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| IV  | <input type="checkbox"/>            | Lack of unity of invention   |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| V   | <input checked="" type="checkbox"/> | Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| VI  | <input type="checkbox"/>            | Certain documents cited  |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| VII   | <input type="checkbox"/>            | Certain defects in the international application   |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |
| VIII  | <input type="checkbox"/>            | Certain observations on the international application  |                                     |                      |    |                          |          |     |                          |  |    |                          |                            |   |                                     |  |    |                          |                         |     |                          |  |      |                          |   |

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|---|--|
| Date of submission of the demand<br><br>18.06.2004  | Date of completion of this report<br><br>01.02.2005  |
| Name and mailing address of the International preliminary examining authority:<br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized Officer<br><br>Scharl, W<br><br>Telephone No. +49 89 2399-2489<br> |

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/DK 03/00865

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, Pages

|            |  |
|------------|--|
| 1, 2, 4-13 | as published                                     |
| 3, 3a      | received on 18.06.2004 with letter of 15.06.2004 |

### Claims, Numbers

|      |  |
|------|--|
| 1-11 | received on 26.10.2004 with letter of 22.10.2004 |
|------|--|

### Drawings, Sheets

|         |              |
|---------|--------------|
| 1/2-2/2 | as published |
|---------|--------------|

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/DK 03/00865**

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

|                               |             |      |
|-------------------------------|-------------|------|
| Novelty (N)                   | Yes: Claims | 1-11 |
|                               | No: Claims  |      |
| Inventive step (IS)           | Yes: Claims | 1-11 |
|                               | No: Claims  |      |
| Industrial applicability (IA) | Yes: Claims | 1-11 |
|                               | No: Claims  |      |

**2. Citations and explanations**

**see separate sheet**

1. The closest prior art is described in DK-B-154 099 cited in the present application and corresponding to document US-A-4 543 753 (D1) cited in the international search report.

D1 discloses a sheet flashing member according to the preamble of claim 1. Here two different lower flashing members are used in order to provide a seal between the lower neighbouring corners of two adjacent windows.

The object of the present invention is to provide a sheet flashing member which may easily be adapted to different installation situations and in which the risk of incorrect mounting and insufficient sealing between the roof penetrating structure and the surrounding roofing is substantially reduced.

This is accomplished in that at least one of the corner segments at a surface thereof comprises at least one indication indicating a pattern, such that at least a part of the sheet section may be separated from the remaining part of the flashing member along the indications.

The provision of such an indication at a corner segment of a sheet flashing member is, in respect of the available prior art, novel in concept, and, moreover, there is no teaching in the available prior art which could have led the skilled person to the flashing member claimed in claim 1.

Document WOA-99/27211 describes a flashing assembly comprising four elements each of them being mounted to one of the four sides of a roof penetrating structure. Each element has two through cuts such that a portion of the side may be folded to form a flap which is then fastened to the side surface of the structure. The idea of using one and the same element for different installation situations is not disclosed in said document.

The subject-matter of claim 1 is therefore both novel and involves an inventive step. The claimed flashing member is also industrially applicable. Therefore, claim 1 meets the requirements of Article 33(2), (3) and (4) PCT.

2. Dependent claims 2 to 11 describe further embodiments of the sheet flashing member of claim 1. Therefore, said claims meet also the requirements of Article 33 PCT.

to be mounted on the upper window frame and a sheet portion adapted to be mounted under the roof surface. When water flows down the sloping roof surface and onto the upper flashing member, the gutter directs  
5 the water outwards towards the gutters of the side flashing members. In contrast, the lower flashing member is adapted to provide a seal between the lower window frame portion and the upper surface of the roof such that water entering the space between the  
10 window and the roof is directed outwards and/or downwards onto the outer surface of the roof. Further, the lower flashing member also serves to deflect the water led downwards from the side gutters for which reason the lower flashing is normally somewhat wider  
15 than the combined width of the window and the two side flashing members, the additional width being provided by the corner segment allowing the water to flow to either side when coming from the side gutter.

As follows from the above, the corner segments  
20 adapted to be used between a window and the surrounding roof is not suitable for use between two neighbouring windows, which normally will be placed relatively close to each other.

25      *Continued on page 3a*

3a

WO99/27211 describes a flashing element for use between roof windows placed closely side by side. This element, consisting of a substantially rectangular piece of sheet material, has two cuts in each of the sides facing the two windows. The cuts allow a portion of the side to be folded to form a flap, which is then fastened to side surface of the window, while the rest of the element is substantially in plan with the roof. There is, however, no mentioning of the possibility of using the same element for different installation situations.

EP-A-0 316 655 describes a flashing member folded from a flexible sheet blank. The blank is provided with weakening lines to facilitate the folding and possibly with cuts to i.e. allow projecting corners or flaps. The point of the in-situ folding is that a reliably watertight flashing member may be achieved from a flat blank, which is cheap to store and transport. It is mentioned, that the cuts may be made in-situ, but there is no indication where to make the cuts.

The object of the present invention is to provide a sheet flashing member which provides for a standardized and cost-optimised production, which may easily be adapted to different installation situations and in which the risk of incorrect mounting and insufficient sealing between the roof penetrating structure and the surrounding roofing is substantially reduced.

This and further objects are met by the provision of a flashing member of the kind mentioned in the in-

Continued on page 4

AMENDED SHEET



## P A T E N T   C L A I M S

1. A sheet flashing member (1) comprising:

a sheet section (40) defining a plane and including a main portion (10) as well as first and second  
5 corner segments (20, 30), the main portion extending along a portion of a roof penetrating structure and the corner segments extending along other portions of the roof penetrating structure perpendicularly to the main portion, and

10 at least one flange (11, 21) arranged at an angle relative to the plane of the sheet section and adapted to engage a surface of a roof penetrating building structure, c h a r a c t e r i z e d in that

15 at least one of said corner segments at a surface thereof comprises at least one indication (22, 32, 34, 38) indicating a pattern, such that at least a part of the sheet section may be separated from the remaining part of the flashing member along the indi-  
20 cations in order to transform the respective corner segment from an initial state to a transformed state.

2. A sheet flashing member as defined in claim 1, wherein each said indication (22, 32, 34, 38) comprises a visual indication in the shape of at least  
25 one longitudinally extending line or a longitudinally extending row of dots, short sections etc.

3. A sheet flashing member as defined in claim 1, wherein each said indication (22, 32, 34, 38) comprises a weakening section.

30 4. A sheet flashing member as defined in claim 3, wherein said weakening sections includes at least one groove.

5. A sheet flashing member as defined in claim 4,

wherein said groove is formed by depression.

6. A sheet flashing member as defined in claim 3, wherein said weakening sections comprise a longitudinally extending cord member accommodated in the corner segment (20, 30).

7. A sheet flashing member as defined in any of the previous claims, wherein the pattern defines one or more indications delimiting an area (26, 37) of the end portion (20, 30) which, when separation has taken place, thereby can be removed.

8. A sheet flashing member as defined in any of the previous claims, wherein the sheet section (40) has a general longitudinal orientation, the pattern defining at least one indication (38) arranged at an oblique angle relative to the general longitudinal orientation, the oblique indication being directly or indirectly connected to a free edge (33, 35) of the sheet section.

9. A sheet flashing member as defined in any of the previous claims, wherein the sheet section (40) includes a main portion (10) and the first and second end portions define first and second corner segments (20, 30), the main portion comprising an upstanding flange (11) and the first and second corner segments comprising first and second flanges (21, 31) arranged substantially perpendicularly to the upstanding flange, the flanges (11, 21, 31) being adapted to engage a longitudinal surface portion of a roof penetrating building structure as well as its associated corner portions.

10. A sheet flashing member as defined in claim 9, comprising a skirt element (50) which can be adapted to engage an upper roof surface.



11. A sheet flashing member as defined in claim 9 or 10, wherein the first corner segment (20) comprises an indication (22) arranged across the width thereof and generally perpendicularly to the general longitudinal orientation, and wherein the second corner segment (30) comprises first and second indications (32, 34) defining a portion (37), and a third indication (38) arranged at an oblique angle relative to the general longitudinal orientation and connected to said portion.